

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

TRANSLATION
PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See form PCT/ISA/210**

Applicant's or agent's file reference VALITEC CAS 3		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/FR2005/001027	International filing date (day/month/year) 26.04.2005	Priority date (day/month/year) 07.05.2004	
International Patent Classification (IPC) or both national classification and IPC H05F3/04			
Applicant VALITEC			

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(h) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-22</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-22</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1-22</u>	YES
	Claims	_____	NO

2. Citations and explanations:

1 Reference is made to the following documents:

D1: US 4 417 293 A (LARIGALDIE ET AL) 22 November 1983
(1983-11-22)

D2: US 3 317 790 A (WHITBY KENNETH T) 2 may 1967 (1967-
05-02)

D3: WO 00/74188 A (MERCIER JOEL; GENIE ET ENVIRONNEMENT
(FR) 7 December 2000 (2000-12-07)

D4: US 4 542 434 A (GEHLKE ET AL) 17 September 1985
(1985-09-17)

2 Document D1, which is considered to represent the most relevant prior art, describes (the references in parentheses apply to this document) a static electricity eliminator comprising at least one nozzle having a body defining a supersonic jet (122) for pressure reduction of a compressed gas, a corona tip (125) located close to the neck (124) of the jet and an electricity supply circuit (64) connected to the tip of the corona.

2.1 The subject matter of the independent claim 1 differs from the subject matter disclosed by D1 in that the corona tip constitutes a surgical needle made of steel with chrome, the tip of which has a diameter of less than

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30 micrometres.

2.2 The subject matter of claim 1 is therefore novel (PCT Article 33(2)). The problem to be solved by the present invention can be considered to be increasing the effectiveness of the elimination of electrostatic charges, particularly for the treatment of polymers.

2.3 There is no reference to the material, type or diameter of the needle in D1.

2.4 Document D2 describes the possibility of using a stainless steel needle (page 9, lines 13-15) the diameter of which is several micrometres (page 19, line 21) in a device for generating ions which makes it possible to maintain a specific ionic density on the interior of premises. This device is not suitable for the elimination of electrostatic charges in an industrial environment. It does not reveal the use of a surgical needle as the emitter.

2.5 Document D3, describes (the references in parentheses apply to this document) the elimination of electrostatic charges in the treatment of plastics (see column 3, line 46) and the use of a needle of about 10 micrometres diameter in a sonic jet nozzle (claim 1). D1 does not indicate the type and the material of the needle nor the use of a supersonic jet.

2.6 Document D4, describes (the references in parentheses apply to this document) the use of surgical needle (column 5, line 61) in an ion generator used for the

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control of concentrations of ions in open spaces (rooms of a house). It is not suitable for electrostatic discharge in an industrial environment such as in the treatment of polymers. It does not indicate the diameter of the needle and does not relate to the use of a supersonic jet.

3 The combination of features presented in claim 1, in particular a surgical needle made of steel with chrome, the point of which has a diameter of less than 30 micrometres is not explicit or mentioned implicitly in the prior art (D1-D4).

The solution to the problem proposed (paragraph 2.2) in claim 1 of the present application is therefore considered to involve inventive step (PCT Article 33(3)).

4 Claims 2-22 depend on claim 1 and therefore also satisfy as such the requirements of the PCT with regard to novelty and inventive step.